IN THE CLAIMS

The following is a complete listing of the claims, and replaces all earlier

versions and listings.

1.   (Currently Amended) A method of transforming a digital signal

representing a physical quantity into signals of frequency sub-bands distributed in at least

two different frequency bands and in at least two different resolutions, comprising the steps

of:

spatially dividing the signal into first blocks all having a same

predetermined first number of samples,

transforming each of the first blocks into a plurality of second blocks

by a space-frequency transformation, any second block under consideration having a

second respective number of samples which depends on the resolution of the second block

under consideration and which is inferior to a predetermined third number, and containing

samples selected according to their frequency, and

grouping second blocks having the same second number of samples

and samples selected according to the same frequency band, and issuing from the

transformation of different spatially adjacent first blocks, in order to form third blocks all

having a same the predetermined third number of samples which is at least equal to the

largest of the second numbers.

2.   (Previously Presented) The method according to Claim 1, in which

the transformation is a wavelet transformation.

- 3 -

3.   (Previously Presented) The transformation method according to Claim 1 or 2, in which the first blocks overlap in pairs on a fourth predetermined number of samples.

4.   (Canceled)

5.   (Previously Presented) The method according to Claim 1 or 2, in which the first blocks are processed in a predetermined order, such that the signal is transformed zone by zone, a zone of the signal being processed at all the resolution levels before passing to a following zone.

6.   (Canceled)

7.   (Currently Amended) A method of coding a digital signal representing a physical quantity into signals of frequency sub-bands distributed in at least two different frequency bands and in at least two different resolutions, comprising the steps of:

spatially dividing the signal into first blocks all having a same predetermined first number of samples,

transforming each of the first blocks into a plurality of second blocks by a space-frequency transformation, any second block under consideration having a second respective number of samples which depends on the resolution of the second block

- 4 -

under consideration and which is inferior to a predetermined third number, and containing

samples selected according to their frequency, and

grouping second blocks having the same second number of samples

and samples selected according to the same frequency band, and issuing from the

transformation of ~~different~~ spatially adjacent first blocks, in order to form third blocks all

having ~~a same~~ the predetermined third number of samples ~~which is at least equal to the~~

~~largest of the second numbers~~.

8.   (Previously Presented) The method according to Claim 7, in which

the transformation is a wavelet transformation.

9.   (Previously Presented) The method according to Claim 7 or 8, in

which the first blocks overlap in pairs on a fourth predetermined number of samples.

10.   (Canceled)

11.   (Previously Presented) The method according to Claim 7 or 8, in

which the first blocks are processed in a predetermined order, such that the signal is

transformed zone by zone, a zone of the signal being processed at all the resolution levels

before passing to a following zone.

12.   (Canceled)

13.   (Previously Presented) The method according to Claim 7 or 8, further comprising the steps of quantization and entropic coding of the transformed signal.

14.   (Previously Presented) The method according to any one of Claims 1, 2, 7, and 8, in which the digital signal is an image signal.

15.   (Currently Amended) A device for transforming a digital signal representing a physical quantity into signals of frequency sub-bands distributed according to at least two different frequency bands and according to at least two different resolutions, comprising:

means for spatially dividing the signal into first blocks all having a same predetermined first number of samples, .

means for transforming each of the first blocks into a plurality of second blocks by a space-frequency transformation, any second block under consideration having a second respective number of samples which depends on the resolution of the second block under consideration and which is inferior by a predetermined third number, and containing samples selected according to their frequency, and

means for grouping second blocks having the same second number of samples and samples selected according to the same frequency band, and issuing from the transformation of ~~different~~ spatially adjacent first blocks, in order to form third blocks all having ~~a same~~ the predetermined third number of samples ~~which is at least equal to the largest of the second numbers~~.

16.   (Previously Presented) The device according to Claim 15, in which the transformation means are adapted to implement a wavelet transformation.

17.   (Previously Presented) The device according to Claim 15 or 16, in which the division means are adapted to form first blocks which overlap in pairs on a fourth predetermined number of samples.

18.   (Previously Presented) The device according to Claim 15 or 16, in which the division means are adapted to form first blocks which are adjacent.

19.   (Currently Amended) The device according to Claim 15 or 16, ~~in which that it is~~ adapted to process the first blocks in a predetermined order, such that the signal is transformed zone by zone, a zone of the signal being processed at all the resolution levels before passing to a following zone.

20.   (Canceled)

21.   (Currently Amended) A device for coding a digital signal representing a physical quantity into signals of frequency sub-bands distributed according to at least two different frequency bands and according to at least two different resolutions, comprising:

means for <u>spatially</u> dividing the signal into first blocks all having a same predetermined first number of samples,

means for transforming each of the first blocks formed at the previous step into a plurality of second blocks by a space-frequency transformation, any second block under consideration having a second respective number of samples which depends on the resolution of the second block under consideration and which is inferior to a predetermined third number, and containing samples selected according to their frequency, and

means for grouping second blocks having the same second number of samples and samples selected according to the same frequency band, and issuing from the transformation of ~~different~~ spatially adjacent first blocks, in order to form third blocks all having ~~a same~~ the predetermined third number of samples ~~which is at least equal to the largest of the second numbers~~.

22. (Previously Presented) The device according to Claim 21, in which the transformation means are adapted to implement a wavelet transformation.

23. (Previously Presented) The device according to Claims 21 or 22, in which the division means are adapted to form first blocks which overlap in pairs on a fourth predetermined number of samples.

24. (Previously Presented) The device according to Claim 21 or 22, in which the division means are adapted to form first blocks which are adjacent.

25.   (Previously Presented) The device according to Claim 21 or 22, wherein said device processes the first blocks in a predetermined order, such that the signal is transformed zone by zone, a zone of the signal being processed at all the resolution levels before passing to a following zone.

26.   (Canceled)

27.   (Previously Presented) The device according to Claim 21 or 22, further comprising means for the quantization and entropic coding of the transformed signal.

28.   (Previously Presented) The device according to any one of Claims 15, 16, 21, and 22, adapted to process a digital signal which is an image signal.

29.   (Currently Amended) The device according to any one of Claims 15, 16, 21, and 22, such that the division, transformation and grouping means are incorporated in:

a controller,

[[-]] a read only memory containing a program for coding each of the blocks of data, and

a random access memory containing registers adapted to record variables modified during the running of the program.

30.   (Previously Presented) A digital apparatus including means of implementing the transformation method according to any one of Claims 1, 2, 7, and 8.

31.   (Previously Presented) A digital apparatus including the device according to any one of Claims 15, 16, 21, and 22.